DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-016005 Address: 333 Burma Road **Date Inspected:** 22-Jul-2010

City: Oakland, CA 94607

OSM Arrival Time: 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: Mr. Oiu Wen **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:**

Tower **Bridge No:** 34-0006 **Component:**

Summary of Items Observed:

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 11

This QA Inspector performed randomly Visual Inspection and Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6027 (UT) report for this date. The member is identified as Tower Strut. The weld designations reviewed are as follows.

ND1-STSA4-6-139M-2-5A/B, 6A/B, 73A/B, 74A/B, 9A, 10A, NDT Notification No-06252

This QA Inspector observed the following work in progress:

BAY 11: SMAW Process.

This QA Inspector observed ZPMC qualified welding personnel identified as 040614, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as ESD1-SPSA5-12-4A. ZPMC QC Identified as Shao Hai Long, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1.

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This QA Inspector observed ZPMC qualified welding personnel identified as 040656, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as WSD1-SPSA5-7-4A. ZPMC QC Identified as Shao Hai Long, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 046704, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as WSD1-SPSA5-12-4B. ZPMC QC Identified as Shao Hai Long, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 054460, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as WSD1-SPSA5-17-1B. ZPMC QC Identified as Shao Hai Long, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1.

BAY 11 OBG Lift 13, SAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 202756, Perform Submerged Arc Welding (SAW) on Bike Path of OBG lift 13. Joint identified as BK004A1-008-009, ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2221-B-L2c-S-2.

This QA Inspector observed ZPMC qualified welding personnel identified as 041716, Perform Submerged Arc Welding (SAW) on Bike Path of OBG lift 13. Joint identified as BK004A1-007-009, ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2221-B-L2c-S-2.

BAY 10,

SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 500363, Perform Shielded Metal Arc Welding (SMAW) on South Tower lift 5 Grillage plate, Joint identified as SSD1-TL5-1F-F-24A. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 057258, Perform Shielded Metal Arc Welding (SMAW) on South Tower lift 5 Grillage plate, Joint identified as SSD1-TL5-1E-F-5A. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 050289, Perform Shielded Metal Arc Welding (SMAW) on South Tower lift 5 Grillage plate, Joint identified as SSD1-TL5-1F-F-11B. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

BAY 11

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During random in process observations this Caltrans Quality Assurance Inspector (QA) observed the following: Production welding being performed without a ZPMC Quality Control (QC) Inspector present for a period exceeding 30 minutes. This QA was present from 08:10 to 09:00 hours. This time frame exceeds the allowable maximum time for QC Inspection coverage as required by Caltrans Special Provision Section 8-3.01. The welding being performed in the following TOWER component: Location – Tower fabrication Bay#11, Angle Connection plate. Plate designations:-ED1-SA4-69-119M-1, ED1-SA4-69-119M-2, WD1-SA4-56-123M-2, WD1-SA4-56-127M-4, WD1-SA4-56-135M-1, All effected angle plates are identified as Seismic Performance Critical Material (SPCM). This QA Inspector informed ABF personnel at 9:05 of this QC absence. This QA inspector generated incident report on this date for further information, please see the attached pictures below.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.





Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Michael Ng Phone: 15921845703, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Shailesh	Quality Assurance Inspector
Reviewed By:	Clifford, William	QA Reviewer